AUTODOC CLUB

How to change spark plugs on **BMW E90** – replacement guide

VIDEO TUTORIAL

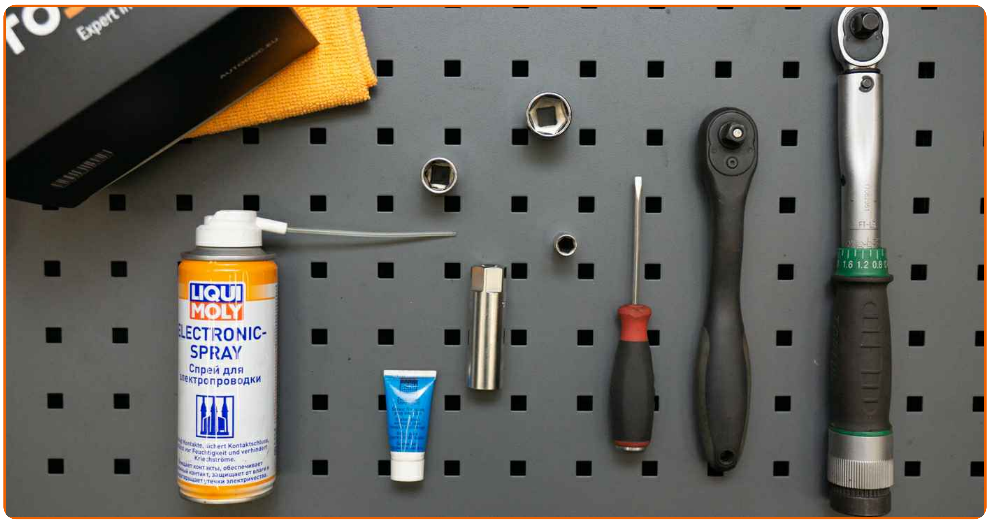


Important!

This replacement procedure can be used for:
BMW 3 Saloon (E36) 316i 1.6, BMW 3 Saloon (E36) 318is 1.8, BMW 3 Coupe (E36) 318is 1.8, BMW 3 Coupe (E36) 316i 1.6, BMW 3 Convertible (E36) 318i 1.8, BMW 3 Compact (E36) 316i 1.6, BMW 5 Touring (E34) 518g 1.8, BMW 3 Compact (E36) 318ti 1.8, BMW 5 Saloon (E34) 518i 1.8, BMW 3 Saloon (E36) 318i 1.8, BMW 3 Coupe (E36) 318is 1.9, BMW 3 Touring (E36) 318i 1.8, BMW 3 Saloon (E36) 318is 1.9, BMW 3 Compact (E36) 318ti 1.9, BMW Z3 Roadster (E36) 1.9 i, (+ 10)

The steps may slightly vary depending on the car design.

REPLACEMENT: SPARK PLUGS – BMW E90. LIST OF THE TOOLS YOU'LL NEED:



- Dielectric grease
- High-temperature anti-seize lubricant
- Drive socket # 8
- Drive socket # E14
- Drive socket # E18
- Spark plug socket # 16
- Ratchet wrench
- Torque wrench
- Flat Screwdriver
- Fender cover

BUY TOOLS

Replacement: spark plugs – BMW E90. Tip from AUTODOC:

- The replacement procedure is the same for all spark plugs.
- All work should be done with the engine stopped.

REPLACEMENT: SPARK PLUGS – BMW E90. USE THE FOLLOWING PROCEDURE:

1. Open the hood.



2. Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.

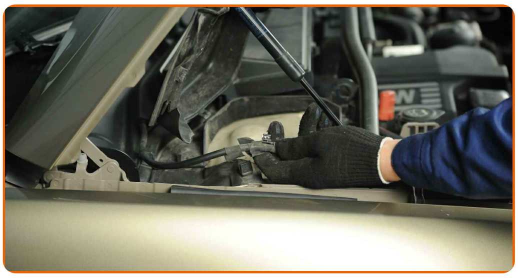
3. Remove the clips of the plastic cowl grille. Use a flat screwdriver.



4. Remove the wiper cowl grille located on the left side. Use a flat screwdriver.



5 Detach the electrical wiring from the upper part of the microfilter housing.



6 Remove the clips of the plastic cowl grille. Use a flat screwdriver.

7 Remove the wiper cowl grille located on the right side. Use a flat screwdriver.



8 Unscrew the fasteners of the cowl grille. Use a drive socket #8. Use a ratchet wrench.

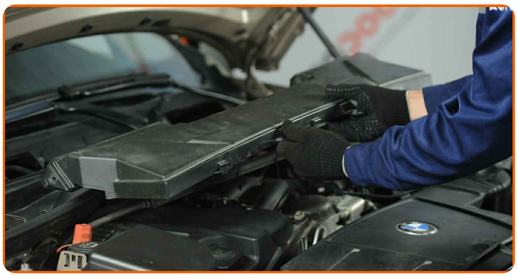


9 Raise the wiper plastic cowl grille.

10 Unscrew the fasteners of the cabin filter housing cover. Use a drive socket #8. Use a ratchet wrench.



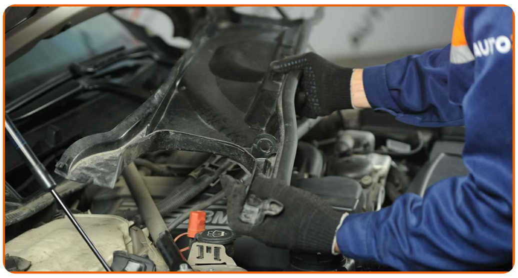
11 Remove the cabin filter housing cover.



12 Remove the clips of the plastic cowl grille.

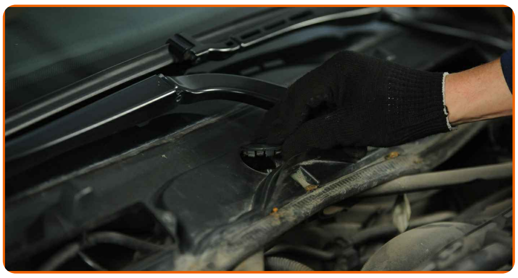


13 Raise up and remove the cowl grille.



14 Unscrew the fasteners of the diagonal braces. Use a drive socket #E14. Use a ratchet wrench.

15 Take off the cover above the fastener that holds the diagonal braces. Use a flat screwdriver.



16 Unscrew the fasteners of the diagonal braces. Use a drive socket #E18. Use a ratchet wrench.



17 Remove the fastening bolt.

18 Remove the diagonal brace.



19 Unscrew the oil filler plug.

20 Remove the oil filler cap. Use a flat screwdriver.



21 Remove the engine cover.

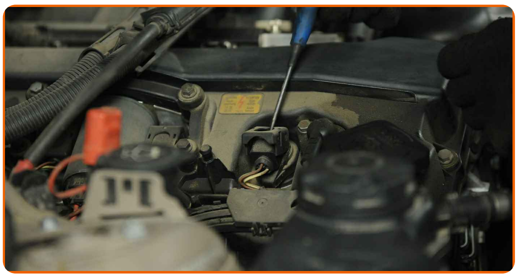


AUTODOC recommends:

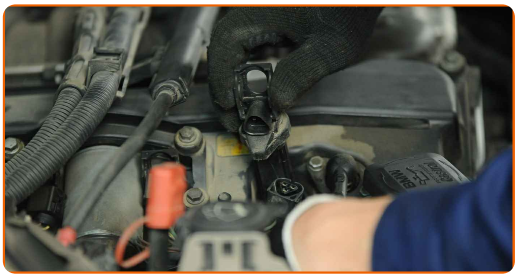
- Replacement: spark plugs – BMW E90. Do not use excessive force when removing the part as this may damage it.

22 Install the oil filler cap.

23 Unplug the connectors from the ignition coils. Use a flat screwdriver.



24 Take out the ignition coils from the spark plug wells. Use a flat screwdriver.



Replacement: spark plugs – BMW E90. Professionals recommend:

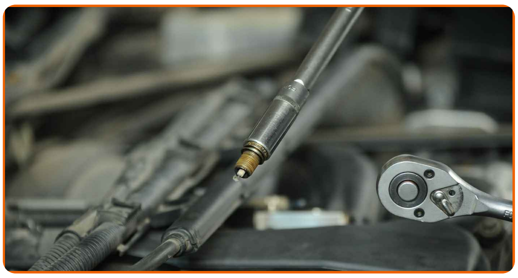
- Remember the sequence of steps for ignition coil demounting.

25 Clean dirt, dust and debris from inside the spark plug wells.

26 Unscrew the spark plugs. Use the spark plug socket #16. Use a ratchet wrench.



27 Take out the spark plugs. Use the spark plug socket #16.



28 Apply a thin layer of a special high temperature anti-seize lubricant to the threads of the new spark plugs.



29 Install the new spark plugs into their mounting seats. Use the spark plug socket #16.



30 Screw new spark plugs and tighten them. Use the spark plug socket #16. Use a torque wrench. Tighten it to 27 nm torque.

Replacement: spark plugs – BMW E90. AUTODOC experts recommend:

- Don't tighten the plugs with excessive force. Exceeding tightening torque can damage the thread connection.
- Be careful when working with a spark plug wrench. Its skewing can cause damage to the threaded connection.

31

Treat the ignition coil connector with electronic spray. The spray will protect the electrical contacts from corrosion, oxidation, and will reduce the contact resistance.



32

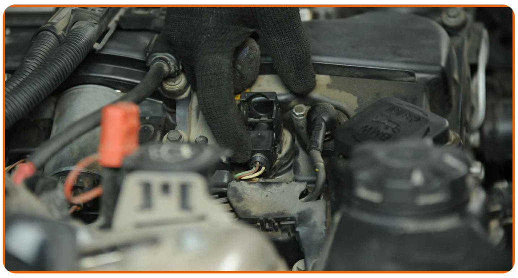
Install the ignition coils to the spark plug wells. Make sure you hear a click indicating that it is locked in place.



Replacement: spark plugs – BMW E90. Professionals recommend:

- Follow the installation sequence.

33 Plug in the connectors of the ignition coils.



34 Remove the oil filler cap.

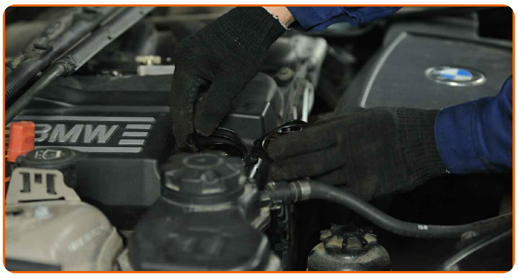
35 Install the engine cover and secure it.



Replacement: spark plugs – BMW E90. AUTODOC recommends:

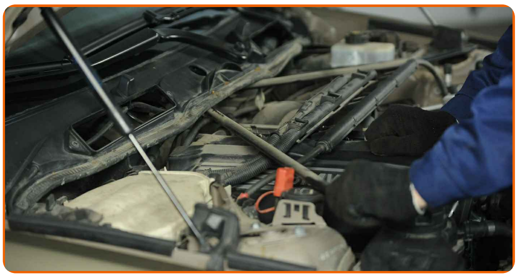
- Make sure the engine cover is properly seated. It should not be displaced with respect to the guiding fasteners.
- Do not apply excessive force when installing the part. Otherwise you may damage the fasteners.

36 Install the oil filler cap.



37 Tighten the oil filler cap.

38 Install the diagonal brace.



39 Screw in the fasteners of the diagonal braces.



40 Install the fastening bolt.

41 Tighten the fasteners of the diagonal braces. Use a drive socket #E18. Use a torque wrench. Tighten it to 100 Nm torque.+100°



AUTODOC recommends:

- Important! Be sure to use new fasteners.

42 Tighten the fasteners of the diagonal braces. Use a drive socket #E14. Use a torque wrench. Tighten it to 40 Nm torque.+60°



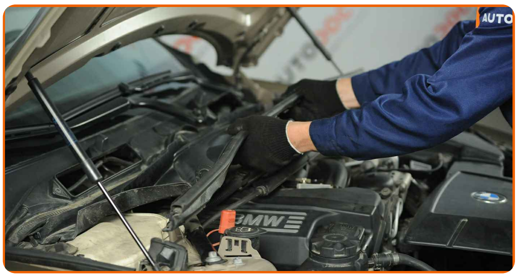
AUTODOC recommends:

- Important! Be sure to use new fasteners.

43 Put the cover above the fastener that holds the diagonal braces back in place.



44 Install and secure the cowl grille.



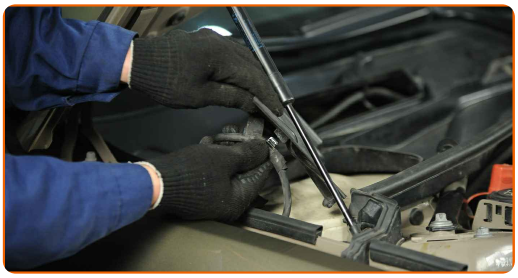
45 Install the fasteners of the wiper plastic cowl grille.



46 Tighten the fasteners of the cowl grille. Use a drive socket #8. Use a torque wrench. Tighten it to 11 nm torque.



47 Attach the electrical wiring to the upper part of the microfilter housing.



48 Install the wiper cowl grille on the left side.



49 Install the fasteners of the wiper plastic cowl grille.



50 Install and secure the wiper cowl grille located on the right side.



51 Install the fasteners of the wiper plastic cowl grille.

52 Reinstall the cabin filter housing cover.



53 Screw in the fasteners of the cabin filter housing cover. Use a drive socket #8. Use a ratchet wrench.



54 Remove the fender protection cover.

55 Close the hood.



56 Run the engine for a few minutes. This is necessary in order to make sure that the component operates properly.



57 Shut off the engine.

WELL DONE!

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